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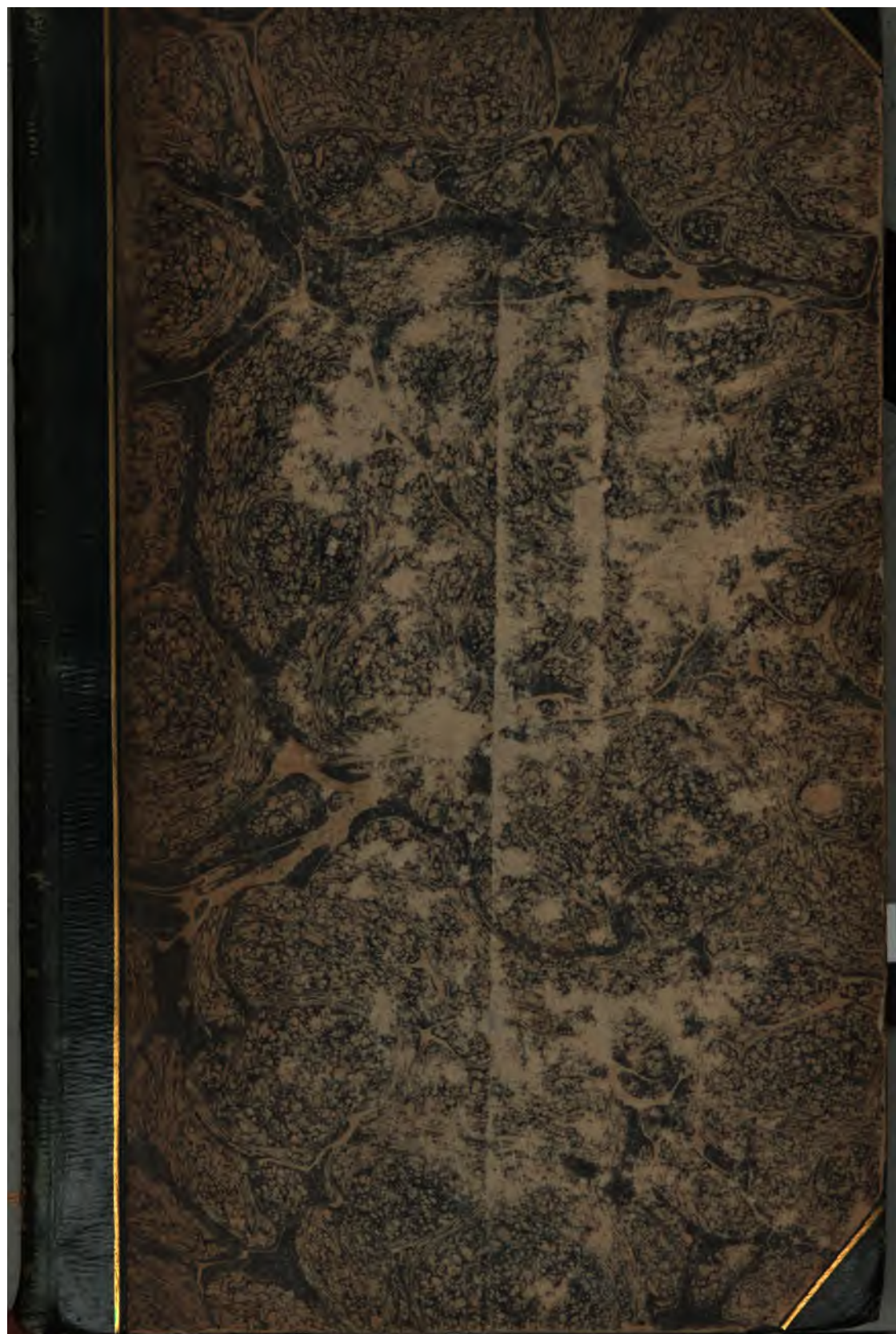
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SKETCH
OF
LECTURES
ON
MEADOW AND PASTURE GRASSES,

DELIVERED IN THE
DUBLIN SOCIETY'S BOTANICAL GARDEN,
GLASNEVIN.



BY
WALTER WADE, ESQ. M. L. S.

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TO THE DUBLIN GENERAL DISPENSARY, HONORARY MEMBER OF THE
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ROYAL COLLEGE OF SURGEONS IN IRELAND, AND TO
THE RIGHT HONORABLE AND HONORABLE THE
DUBLIN SOCIETY.



"Hinc fessæ pecudes pingues per pabula læta
Corpora deponunt, et candens lacteus humor
Uteribus manat distentis." LUCRETIVS.



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1808.

PREFACE.

THE public lectures given on meadow and pasture grasses, in the Dublin Society's Botanical Garden, Glasnevin, having been much attended to, the professor and lecturer on botany to the Society considers himself called upon, from that attention which has been paid to them, and some strong solicitations made to him, to publish a sketch, or brief syllabus, by way of heads, of the most interesting points and useful facts he has brought forward upon the occasion, by which means the public may be the better enabled to understand the subject, and to profit by the information; and more particularly should the *Pecudarium* and *Fœnarium*, or cattle and hay divisions of the garden, and *Gramina Vera*, or true grass division, arrest their attention, and induce their exertions for the improvement of their meadow and pasture lands, and the feeding of their different useful domestic animals, as horses, horned cattle, sheep, &c.

The professor is likewise the more willing to put such a sketch forward, not only from the self-evident necessity of the measure, but from the opportunity that is now afforded, through the liberality and favour of the Society, of consulting the most splendid, the most valuable, and the most interesting publications on the various subjects of agriculture and rural economy, in the Society's extensive and scientific library; among which may be noticed that first-rate splendid work, Hofst's Austrian Grasses; (*Icones et Descriptiones Graminum Austriacorum Nicolai Thomæ Hofst, M. D. Vindobonæ* 1801, 1802, 1805.) The uncommon great accuracy of the descriptions, and the highly finished, exact, and satisfactory representations of the different objects noticed in this publication, must stamp it as one of the very first rate performances on the subject of grasses.

To make this sketch still more useful and interesting, coloured figures of the different grasses noticed will throughout be referred to, in authors of the highest celebrity.

EXPLICATION OF THE NAMES OF THE
CONTRACTED AUTHORS.



- Fl. Lond.* Flora Londinensis.—By Wm. Curtis,
London, 2 vols. folio.
- Eng. Bot.* English Botany.—By J. E. Smith,
M. D. and James Sowerby, F.L.S. London,
25 vols. &c. 8vo.
- Fl. Rust.* Flora Rustica.—By Thomas Martyn,
B.D. F.R.S. &c. and Frederick P. Nodder,
London, 4 vols. 8vo.
- Gram. Brit.* Gramina Britannica, or Represen-
tations of British Grasses.—By F. L. Knapp,
Esq. F.L.S. & A.S. London, 1 vol. 4to. 1804.
- Gram. Aust.* Icones et Descriptiones Graminum
Austriacorum.—Nicholai Thomæ Hofst, M.D.
Vindobonæ, 1801, 1802, and 1805, 3 vols.
imperial folio.
- Cat. Syst. Dub.* Catalogus systematicus planta-
rum indigenarum in comitatu Dublinensi in-
ventarum.—Auctore Gualtero Wade, M.D.
&c. Dublini, 1794, 1 vol. 8vo.
- Fl. Dub. Spec.* Floræ Dublinensis Specimen.—
By Walter Wade, M.D. &c. folio, with plates.
- Pl.*

Pl. Rar. Hib. Plantæ rariores in Hibernia inventæ.—By Walter Wade, M.D. &c. 1804, Dublin, 1 vol. 8vo.

De Holco Odorato. De Holco Odorato, or observations on sweet-scented Holcus.—By Walter Wade, M.D. &c. 4to. 1804, with a figure.

Transf. Dub. Soc. Transactions of the Dublin Society for 1804.

INTRODUCTION.

INTRODUCTION.

ABSOLUTE necessity of botanical knowledge in relation to agriculture and the feeding of cattle;—vegetable world intended for the support of the animal world—a few animals carnivorous—certain plants disagreeable to some, which are agreeable to others—some poisonous, wholesome to others—this not by chance—for the very best purposes—wisely ordained that certain plants must be left to certain animals—do not all grow in the same climate—every plant has its destined spot—animals who live upon particular plants, abound in certain situations—rein-deer lichen* on cold alpine situations—induce the rein deer to live there the whole winter—sheep's fescue-grass,† supposed to induce sheep where it abounds—camel's hay—camels reside on the barren loose sands,

* *Lichen rangiferinus*, Eng. Bot. v. 3. p. 173. Pl. Rar. Hib. 127.

† *Festuca ovina*, Eng. Bot. v. 9. p. 586. Cat. Syl. Dub. 25.

sands, where it abounds—many similar instances adduced—brutes designed by nature to be guided by instinct—incautiously acting against it, death or disease the consequence.

Plants injurious only respectively to the species of animals—spurge, or wart-wort*—juice injurious to the human species—some insects live entirely upon it—long-leaved water-hemlock† will kill a cow—goats delight in it—monk's-hood will kill a goat—innoxious to horses—many other examples.

Young animals least deceived by their smell and taste—nice and cautious in distinguishing plants—hunger compels many to eat plants not intended for them by nature—meadow-saffron,‡ strange cattle frequently killed by eating it—fall into dysentery when brought into marshy grounds—cattle used to such places, avoid the plants injurious to them—dreadful effects on horned cattle, by eating long-leaved water-hemlock—to goats, as before, delicious.

——“Videre

* *Euphorbia helioscopia*, Fl. Lond. v. 1. t. 71. Eng. Bot. v. 13. 833. Cat. Syl. Dub. 130.

† *Cicuta virosa*, Eng. Bot. v. 7. 479.

‡ *Colchicum autumnale*, Eng. Bot. v. 2. 133. Fl. Rust. t. 60.



—“Videre licet pinguescere sæpe Cicutæ
Barbigeras pecudes, homini quæ est acce venenum.

LUCR.

Experiments on different animals with poisonous plants—no information as to their effects on the human frame—only here in an agricultural point of view. Many instances—some very striking—in Virginia, a species of andromeda a rank poison to sheep—perhaps the marsh-andromeda* of our boggy and marshy situations has the same effect?

By attention, the rural economist may judge of the produce of his different grounds—some afford wholesome nourishment, others not—pressed by hunger, animals will feed on vegetables not grateful or nourishing—not indifferent what species of seeds meadow and pasture lands are sowed with—horses nice in choosing their food—horned cattle, and sheep not so—goats feed upon the greatest variety of plants—necessary for the farmer to be well acquainted with the peculiarities of animals—likewise to judge of his hay—cattle will eat plants in a dried state, which they refuse to eat when green—perhaps not affording good and natural

* *Andromeda polifolia*, Eng. Bot. v. 10. 713. Pl. Rar. Hib. 31.

tural nourishment?—propensities of certain animals to certain plants—cows supposed to eat the crowfoot or butter cups of our fields—not so—they are of a very acrid nature when fresh, and blister the skin—sheep killed in the county Derry, by eating bulbous-rooted crowfoot.*

Apparent that certain animals will feed upon herbs, which others refuse—many are highly noxious to some, whilst they are eaten with impunity by others—early known—first race of shepherds had daily instances among their flocks—known only in the general until of late—butterwort,† hound's-tongue,‡ henbane,§ mullein,|| hemlock,¶ figwort,** &c.—untouched by horses and

* *Ranunculus bulbosus*, Fl. Lond. v. 1. t. 38. Eng. Bot. v. 8. 515. Cat. Syf. Dub. 150. Fl. Ruft. t. 28.

† *Pinguicula vulgaris*, Eng. Bot. v. 1. 70. Cat. Syf. Dub. 8.

‡ *Cynoglossum officinale*, Fl. Lond. v. 2. t. 256. Eng. Bot. v. 13. 921. Cat. Syf. Dub. 51.

§ *Hyoscyamus niger*, Fl. Dub. Spec.—Eng. Bot. v. 9. 591. Cat. Syf. Dub. 61.

|| *Verbascum thapsus*, Eng. Bot. v. 8. 549. Cat. Syf. Dub. 60.

¶ *Conium maculatum*, Fl. Lond. v. 1. t. 42. Eng. Bot. v. 17. 1191. Cat. Syf. Dub. 77.

** *Scrophularia nodosa*, Eng. Bot. v. 22. 1544. Cat. Syf. Dub. 171.

and cattle—cows killed by eating ladies mantle*—irremediable costiveness—hemlock dropwort†—highly poisonous—eaten by sheep and goats—refused by cows and horses—common yew‡—leaves in a half dried state, fatal to horses and cows—goats eat it with safety—daisy,§—horses, sheep, and cows seen to refuse it—acid—many more instances—a course of experiments to ascertain the facts—necessary, and of the utmost consequence—might lay the foundation of further improvements in the economy of cattle, and the laying out of lands. With this view *Fenarium* and *Pecudarium*, or hay and cattle divisions, and *Gramina Vera*, or true grass division, in the Society's garden. Pecudarium for the most part taken from Pan Suecus, *Amœnitates Academicæ*, vol. 2.—above 2000 experiments tried—the sexual or Linnæan system adhered to in this essay—perhaps arranging the plants, agreeable to their usual places of

* *Alchemilla vulgaris*, Eng. Bot. v. 9. 597. Cat. Syf. Dub. 45.

† *Œnanthe crocata*, Fl. Dub. Spec.—Cat. Syf. Dub. 81.

‡ *Taxus baccata*, Eng. Bot. v. 11. 746. Pl. Rar. Hib. 84.

§ *Bellis perennis*, Fl. Lond. v. 1. t. 13. Eng. Bot. 424. Cat. Syf. Dub. 234.

of growth, would be a more apt disposition?—indigenous plants in Sweden, three fourths the same as in Ireland—from the Swedish experiments—horned cattle eat of plants offered to them 276 species, rejected 218—goats 449, refused 126—sheep 387, refused 141—horses 262, refused 212—swine only 72, refusing 171!

GRAMINA

GRAMINA VERA,
OR
TRUE GRASSES.

SCARCELY a name, besides the general one, till within some years back—forms one single idea—a husbandman does not know there are some hundred species*—a great number immediately under his eye—their proper names not generally in use—a just knowledge of them still in its infancy—has not been cultivated on scientific principles—true grasses, their definition—white and red clovers, with faint-foin and lucern, not grasses—their value as artificial or sown grasses. True grass has every constituent part of a flower—the very great majority belong to the class Triandria Digynia in Linnæus's artificial system—a few to other

* Willdenow in his *Species Plantarum*, enumerates nearly 600 species, including wheat, oats, barley, rye, &c.

Doctor Withering in his arrangement of British plants, 123 British species. Mr. Curtis, 115.

The *Flora Britannica* of Doctor Smith, the standard for botanical accuracy, 113 species.

other classes—examples—their seeds do not split into two lobes—rather peculiar to grasses—necessary to arrange grasses into some general subdivisions—spikes and panicles—easily understood—other circumstances—spike defined—panicle defined.

SPIKED GRASSES.

Anthoxan`thum odora`tum,

Sweet smelling, or early spring grass.

Irish name, *BARACHFHEUR* *DEADHBHOLADH.*

Fl. Lond. v. 1. t. 51. Eng. Bot. v. 9. t. 647.

Gram. Brit. t. 1. Gram. Aust. vol. 1. t. 5.

Fl. Ruft. 23. Cat. Syst. Dub. 10.

Some peculiar characters, by which it may be known—a very early grass—though early, continues in marshy situations to produce flowering spikes all the summer—its value doubtful—in moist soils and situations—chiefly in wet lands—often luxuriant in bogs—Statistical Report of the county of Derry—as part of 100, seems to be the most predominant—some circumstances attending its seeding state—careful to observe the proper time of collecting the seed—a curious provision of nature for disseminating the seed—upper part of the husks ripe, and the seeds dispersed before the lower part is ripe—least productive of seed of the valuable

valuable grasses—should it be considered as such, —possesses warm aromatic qualities—may be useful in curing the spring diseases of cattle?—Mr. Marshal, Rural Economy of Gloucestershire—his observations on this head—supposed to be a good grass for sheep pastures—the late Mr. Curtis's observations—colour of spike—pale yellow when ripe, hence *ἀνθος* and *ξανθός* yellow flower.

Rev. Doctor Richardson,—“Elementary treatise on the indigenous grasses of Ireland,” very useful—has much merit—his observations on this grass—does not seem to approve much of it.

Doubtful whether this grass communicates the sweet smell to hay—at the time grasses are cut, is dried up, sapless, and inodorous—might it not afford the most early food for lambs, cultivated alone?

Alope`curus praten`sis,

Meadow fox-tail grass.

Irish name, ULPLOSFHEAR LEANA.

Fl. Lond. v. 2. t. 300. Fl. Rust. 6. Eng. Bot. v. 11. t. 759. Gram. Brit. t. 14. Gram. Aust. vol. 2. t. 31. Cat. Sys. Dub. 17.

Scientific name from *αλωπηξ*, *αλωπηξ*, and *ουρα*, fox's tail—easily known by the hoary soft appearance of its spike—Phleum pratense—spike much longer

longer and rough—fox-tail grafs in fome wet meadows, common—flowers not much later than anthoxanthum—feeds remain in the hufk a long time—not eafily collected—food of a certain fpecies of infect—one third of the feed destroyed by its ravages—propagation and diffusion by feed—extermination to be dreaded—happily provided againft by the interpoftion of another infect, or bug—*Cimex campeftris*—makes the former its peculiar food—destroys thoufands in a day—peculiar circumftances attending fox-tail grafs—stalks green and fucculent, after the hufks have dropped—feed refembles a grain of wheat in miniature—fox-tail grafs vegetates quickly—cut three times in the feafon—poffeffes three great requifites, quantity, quality, and early growth—will not thrive in deep manured foils—as a low land grafs, particularly valuable—Doftor Pultney’s opinion—Linnæus’s—Young’s Annals, vol. 12. 418. 16, 130, &c.—fox-tail grafs perhaps the beft to improve moift grounds?

A native of moft parts of Europe—in many counties in Ireland not common—in fome very fcarce, and not to be met with—in fome counties in England locally found—in South-Wales very fcarce—perhaps originally introduced into our meadows and paftures?—Mr. Marfhall, “Devonfhire Economy,” could not find it—Dr. Richardson’s opinion of foxtail-grafs.

Phleum

Phleum pratense,

Meadow cat's-tail grafs—herd grafs.—Timothy grafs?

Irish name, LOSCATFHEUR LEANA.

Fl. Rust. t. 5. Eng. Bot. v. 15. t. 1076. Gram.
Brit. t. 6. Cat. Syst. Dub. 16.

φλῆον or φλῆως, Theophrastus—Phleos, Pliny.

Distinguished from foxtail-grafs by its rough and long cylindric spike—other distinctions—flowers very late—proper only for moist lands—difference of opinion as to its merits—cows not fond of it—sheep dislike it—swine refuse it—is the Timothy-grafs of North America the same as ours?—Mr. Timothy Hanson—Mr. Wych—Museum Rusticum, v. 2. 161—seeds remain well on the stalks and are easily collected—“Tyrone Statistical Report”—not common in the county of Tyrone—sour, strong clay soils most proper for it—seeds heavier than those of any of our common grasses—working horses thrive remarkably on cat's-tail-grafs—“Derry Report”—excellent in meadows—“Down Report”—fine crops nearly all of this grafs—“Kilkenny Report”—all grasses with close heads, good—poas and paniced grasses not esteemed—“County of Dublin Report”—Mr.

B

Dutton's

Dutton's opinions.—Doctor Richardson's observations—worthy of attention.

From close observation, harsh, late, and not luxuriant, till very late in the season—consult *Fœnarium*, or hay division in the Botanical garden.

In the Statistical Survey of the county of Kildare just published, the author, when speaking of meadow and pasture grasses in general, observes, “that the grasses in the meadow and feeding pastures of the county are of the most valuable kinds; when submitting tillage land to grass, the farmers chiefly sow the seeds from the natural meadows, which are filled with red and white clover, trefoil, ray-grass, white hay-seed, foxtail, meadow fescue, ribwort, &c. &c. In the bottom meadows, particularly those subject to flood, *Timothy-grass* is the principal herbage.”

Lo'lium peren'ne,

Perennial darnel grass, red darnel grass, ray grass,
rie grass, crap. *Pasture ray grass. Timothy.*

Irish name, ROILLE MARTHANACH.

Ft. Rust. 4. Cat. Syst. Dub. 32. Eng. Bot. t.
315. Gram. Brit. t. 100. Gram. Aust. v. 1.
t. 25.

Many varieties—perhaps all of equal value?—
affords excellent hay upon upland pastures and
dry

The outlet valve of the condenser of the engine is
constructed so that it will be opened at night,
the engine being at work, to the point of discharging
the steam into the atmosphere. At the
night the valve is closed, the steam being sent to the
engine, and the valve is opened at the engine station.

Known by the name of "fasting ray grass" - the
cultivators say it is an earlier plant, than the common
ray grass, & that it remains long in the seed.
Botanically, there seems to be but little variation.

Note

Linn's purchase -

a very excellent grass for the Farmer,
although of late years it has
been into disrepute in many parts
of England - its principal ^{merit} is
in its being very early, affording
pasture for sheep before any
of the upland meadows, and
extremely nutritious in its quality.

it should be sown with the
Sabb clover / Trifolium repens /
without any other admixture

Seed - grass, clover, or Rye -
If known, the Dutch Clover (being
of later growth than the Rye grass,
will soon after mowing, throw out
a most abundant ^{after} crop, covering the
whole surface of the ground with
its white flowers like a sheet -

Upon a careful examination of
Mr. Deace's Rye grass, I have never
been able to discover any specific
difference between that and the common

any crop - perhaps it can hardly
be called a variety - Mr. Kenney
occupies good land, and he is
very careful in keeping his crops
properly free from weeds, and other
sorts of crops - it is perhaps
owing to this alone, that the
superior excellence of his seed is
attributed. —

Known by the name of "lasting ray grass" - the
cultivators say it is an earlier plant, than the common
ray grass, & that it remains long in the seed.
Botanically, there seems to be but little variation

Note

Lolium perenne -

A very excellent grass for the Farmer,
although of late years it has
fallen into disrepute in many parts
of England - its principal merit ^{consists}
is its being very early, affording
pasturage for sheep before any
of the upland meadows, and
extremely nutritious in its quality.

It should be sown with the
Suck clover / Trifolium repens /
without any other admixture of

Seed - grass, clover, or Pursail -
If mown, the Dutch clover being
of later growth than the Ray grass, /
will soon after mowing, turn out
a most abundant ^{after} crop, covering the
whole surface of the ground with
its white flowers like a sheet -

Upon a careful Examination of
Dr. Deace's Ray grass, I have never
been able to discover any specific
difference between that and the common

any grapes - perhaps it can hardly
be called a variety - Mr. Kersey
occupies good land, and he is
very careful in keeping his crops
purely free from weeds and other
sorts of grapes - it is perhaps
owing to this alone that the
superior behavior of his seed is
to be attributed. —

Note on the Bay group
(Lolium perenne)

Duke of Bedford.

dry situations—springs as early as other grasses—on very rich soils, a worse grass cannot be sown—extraordinary that goats are not fond of it—some objections to its cultivation—sometimes proves an annual.—Anderson's Essays—Marshall's Gloucestershire—Young's Annals of Agriculture—many useful remarks—Bath Papers—clean hay made of it, preferable for race-horses and hunters—does not affect their wind—affords twice as much nourishment as common hay—horses reject clean corn for it.

None of the writers of the last century speak of ray grass—Plot's Oxfordshire, 1667, first noticed—his remarks worthy of attention.

Large quantities of the seed to be had in many parts of England—some varieties lately much spoken of—Mr. Pacey's variety—has it superior merit? Suspected that by long cultivation the nature of ray-grass is changed—some further interesting remarks on ray-grass—the flowers sometimes furnished with aristæ, awns, or beards—characteristic of *Lolium temulentum*, a dangerous species—"Down Statistical Report"—ray-grass the most excellent they have—"Kilkenny Statistical Report"—some curious and interesting particulars relative to ray-grass, white-hay-feed, and soft brome-grass—"County of Dublin Report," Mr. Dutton's remarks.—Doctor Richardson—no opinion of ray-grass.—Duke of Bedford's communication

nication—entitled to much respect and attention—His Grace's remarks on Pacey's ray-grass—the late Mr. Richard Reynell of Reynella—his remarks and practical investigations—curious and interesting—a variety of *Lolium perenne*, annual! noticed before. Some further remarks. Mr. Campbell, an enlightened agricultural writer—ray-grass united with clover, an excellent sward the end of the second year—practical observations by Mr. Campbell.—Do the stems and flowering parts of grass, or the leaves taken weight for weight, contain most nutriment?—Stems sweeter than the leaves—vegetables containing much saccharine matter, particularly nutritious—the culm, or stalks of ray-grass very sweet—therefore the running up to stems, perhaps, forms no objection—stems not so apt to be injured by continued rains as leaves—not subject to mould.

Ray-grass engages the attention of intelligent farmers at the present day—further particulars—few grasses more early in the spring—none more relished by cattle, or more nutritive—resists bad weather in trying hay seasons—seeds more easily collected, than most other grass seeds—prejudices against it refuted. Some facts adduced to establish its nutritive properties by an accurate practical observer.

Lolium

- A it does not acquire any proportion in height as it
 sown with clover, the foliage of which plant keeping the
 earth moist, enables Lolium to attain a luxuriance
 will not arrive to as an individual plant, arising
 by local circumstances. & The usual luxuriance of
 grass is frequently considerably diminished by culti-
 vation - in rich old pastures we frequently find the
 20 or 30 spikes in each spikelet - but this depends upon
 the soil in which it is sown & is usually reduced in
 sown pastures. It seems the number of the spikes
 obliging the grower to resort to the old practice of
 sowing few plants of each diminished in size, is very
 striking & now, supposing this has been cultivated.

It will be left wandering into several varieties.

1. Bunched at the base - Linn's *Flora Britannica*.
2. Spikes clustered together, with 10 or 12 spikes,
 almost as dense as they are long; this is probably
 the effect of luxuriance, receiving nourishment
 so copiously as to throw out spikelets, with 20 or
 30 spikes in each rachis. This variety is called
 "*Spica lata*" the broad leaved grass of the
 Scotchman.
3. A very branching, branched plant with 2 or 3 spikes
 in the spikelet. Linn. *Flora Britannica*.
4. The corolla terminated by a short awn.
 In this state it has been considered as *Lolium*
 but it has an intermediate rank between
 the *Lolium* and the *Poa*, because.

Lo'lium temulen'tum,

Annual darnel grass, bearded darnel. *Awmed. Rye-grass*

Irish name, ROILLE BREOILLEAN.

Fl. Rust. 4. Eng. Bot. t. 315. Gram. Brit. t.
101. Gram. Aust. vol. 1. t. 26. Plant. Rar.
Hib. 6.

Lolium λαιον ολειν, segetem perdere, or λαιον ολεον,
seges noxia.

Not immediately belonging to our present inquiry—a dangerous grass among corn, and should be well known—scientific and common distinctions—sometimes a weed among grain—a small proportion of its flour, among wheat flour, bread eaten hot, produced violent disorders in the human body.—Leer's Flora Herbornensis, “Gramen inter omnia unicum noxium. Semen temulentos vertiginosque reddit homines, magis adhuc in pane calido, potissimum in potu cerevisia. Etiam equis, canibus, fuisque animalibus noxium, sæpe lethale.” Seed, malted with barley, occasions drunkenness—hence French name, *Ivrâie* (ivre) perhaps has occasioned the Irish name, *rivery*? Not so common as to be extensively dangerous—whole counties without a single specimen—in Pembrokehire so common, as to lease it from
their

their corn to burn it—Welch farmers—in English wheat, this noxious grass seldom found—the native grown corn sowed, always produces it—*Lolium arvense*, corn rye-grass—much similarity—a scarce grass.

Deleterious effects suspected early—Ovid—Virgil twice cursed *lolium*—modern Italians—melancholy habits, “A mangiato pane con loglio.”—St. Matthew’s gospel—the tares certainly infelix *lolium*—proofs.

Hor'deum mur'inum, #

Wall barley, way bennet, wild rye, rye-grass, squirrel-tail grass. *Wayside Barley.*

Irish name, EORNA BALLA.

Fl. Lond. v. 2. t. 327. Fl. Ruft. 108. Eng. Bot. 409. Gram. Brit. t. 104. Gram. Aust. v. 1. t. 32. Cat. Syst. Dub. 32.

Worthy of notice, though an annual, from its early growth—may afford abundant spring food—in an advanced state bad—reasons—very seldom seen in meadows or pastures—sometimes found among hay, therefore should be known—grows in particular situations. ^

Isle of Thanet grass—not the murinum, but the maritimum, or sea species. Eng. Bot. v. 17. 1205. Gram.

^ a sun-dry corn-rag grass, called *Bewer* or
as well as *L. temulentum* in *S. Watson*,
which often attains the length of 14 inches, but
whole plant is of a paler green colour than
associated the *L. temulentum*.

* "*Infelix Lotium*, et *sterilis dominantur avena*
Colog. I. 1792

* hardly to be met with in the ⁶⁴ *W. W.* *W.*

^ Also near cottages, about pathways in the vicinity
villages, & in church yards, & when once established
will keep possession of its station for a long time.

particularly, such as a cow's dung.

It is this grass, which gives that autumnal brown
to the pastures which have been fed, the spike
ing so strongly as to be rejected by
the for the sweeter, herbage that clothes the
etc. I then, perhaps to find the specimen in
a field in light a flowering head, remaining
ough the winter, but decaying in the following
Aug.

Gram. Auf. v. 1. 34. Fl. Ruft. t. 44. Awns or beards of this very rigid and strong—highly troublesome and dangerous to horses when mixed with hay—Haller's opinion of wall barley preposterous?

Hor'deum praten'se.

Meadow barley grafs,

Irish name, EORNA LEANA.

Fl. Ruft. 108. Eng. Bot. t. 409. Gram. Brit. t. 105. Gram. Auf. v. t. 33. *H. fecalinum*?

A more delicate species than the former—forms sometimes a great part of meadow crops—its growth should not be encouraged—high authority to the contrary—Professor Martyn.—Only species that vegetates in pastures.

Cynosu'rus crista'tus,

Crested dog's-tail-grafs, windlestraws.

Irish name, TRATHNINFHEUR CIRAINACH.

Fl. Ruft. 106. Eng. Bot. t. 316. Gram. Brit. t. 64. Gram. Auf. v. 2. t. 96. Cat. Syst. Dub. 34.

Scientific generic name from *κυνός* & *οὐρα* dog's tail.

Has

Has obtained character as food for sheep—reasons assigned—found on good wholesome pastures in high dry grounds—much esteemed, mixed with hard fescue grass*—the late Mr. Curtis's opinion of it not favourable—"County Down Statistical Report"—a very nutritive grass—"Kilkenny"—as amongst the starved and useless—further remarks on this grass—culm or straw-leaves—flowers—semina, or seeds.

Triticum repens,

Dog's grass, squitch grass, couch grass, creeping wheat grass, quickly. *Wandless Quicker grass.*

Fl. Ruft. 124. Eng. Bot. v. 13. t. 909. Gram.
Brit. t. 111. Gram. Aust. v. 2. t. 21. Cat.
Syft. Dub. 33.

Irish name, CRUITHNEACHD BRUIMSEAN.

Triticum πρυος q. σπρυος from σπρυος feed—Latin, q. tritum, *vel quod ex spicis trititando facile excutiat.*

Very common and much disliked by the farmer—bad husbandry and horticulture, that suffer it's growth—watering the lime too much, encourages

* *Festuca duriuscula*, Eng. Bot. v. 7. t. 470. Gram. Brit. t. 68. Gram. Aust. v. 2. t. 83. Cat. Syft. Dub. 26.

rages and promotes its vegetative powers—best means to avoid too generally its dissemination.—The clean husbandman and gardener consider many grasses as couch—creeping soft grass,* oat-like soft grass, or tall oat grass,† &c.—roots—leading joints so sharp and strong as to pierce any moderately hard substance, that may come in their way—therefore easily eradicated—does not spread itself by seed—every joint of the root wonderfully increases it, hence one of its names quick or live grass.

Roots taste like liquorice—sold in large quantities in the markets at Naples for feeding horses—ground with meal—bread.—Cattle cured of schirrous liver in the spring by eating this grass—dogs—leaves vomit—further remarks.

PANICLED

* *Holcus mollis*, Fl. Lond. v. 2. t. 320. Fl. Rust. 119. Eng. Bot. v. 17. t. 1170. Gram. Brit. t. 37. Gram. Aust. v. t. 3.

† *Avena elatior*, Fl. Lond. v. 1. t. 192. Fl. Rust. 7. Eng. Bot. v. 12. t. 813. Gram. Brit. t. 39. Gram. Aust. v. 2. t. 40.

PANICLED GRASSES.

Po'a pratensis,

Smooth stalked meadow grass, great meadow grass.

Irish name, CUISE MIONGHASACH.

Fl. Lond. v. 1. t. 82. Eng. Bot. v. 15. t. 1073.

Gram. Brit. t. 55. Gram. Aust. v. 2. t. 61.

Cat. Syft. Dub. 22.

From ποα, an herb—Theophrastus, a plant in general—ποα ὁλοκληρὴ ἐκαστή, grass as when it is joined with wheat and barley.

Cautiously to be introduced—reasons why—roots propagate themselves like couch—in very old ley grounds very little of this grass—scientific and common distinctions between it and *Poa trivialis*, or rough stalked meadow grass.—*Flora Anglica*, Mr. Hudson—*Flora Londinensis*, Mr. Curtis. Never throws up flowering stems or bents but once in a season—hardy and full of verdure—would answer for certain purposes.—Affords a good crop of sweet leaves at bottom—relished by cattle—affords fine hay, &c.—seeds long in the husk after they are ripe—larger than the seeds of *Poa trivialis*—are covered with a cobweb downy substance, and which adheres to them closely.

Doctor Richardson—inferior in many respects to *Avena flavescens*, yellow oat grass—does not possess the ground so long.

Po'a

•

•

Po'a trivialis,

Rough, or roughish stalked meadow grass, common meadow grass.

Irish name, CUISE GARBGHASACH.

Fl. Lond. v. 1. t. 90. Eng. Bot. v. 15. t. 1072.
Gram. Brit. t. 54. Gram. Aust. v. 2. t. 62.
Cat. Syst. Dub. 23.

Has obtained many names in England—seed-shops *bird-grass*—additional scientific and common distinctions between this and the former—flourishes luxuriantly in water-meadows and the flowings from springs—particularly fond of sheltered situations—generally considered as one of the best grasses—leaves highly acceptable to cattle, &c.—Young's Annals—in many of the volumes much recommended—the circumstances in its favour considered, or epitomized.

Seeds when ripe soon drop—from its roughness, the leaves, &c. much covered with them, joined to the interposition of the cobweb downy substance, which in this species is more abundant—difficult to separate it—therefore not easy to diffuse the seed uniformly—methods tried to separate the connexion.—Formerly supposed to be the famous Salisbury Orcheston grass—not so—Mr. Maton,

5th vol. Linn. Transactions has cleared up all doubts—the meadow composed of many other grasses—two acres and a half afforded ten tons of hay in one year!—Mr. Maton's reasoning on the fertility of this spot conclusive—c. g.—The late Doctor Withering's ingenious observations—deserve much attention—throw a new and interesting light on the subject.

Doctor Richardson condemns this grass as the worst he tried—his reasons—highly honourable and candid.*

Po'a an'nua,

Annual meadow grass, common dwarf poa, Suffolk grass.

Irish name, CUISE BLIADHAINTEA.

Fl. Rust. t. 98. Eng. Bot. v. 16. t. 1141. FL.
Lond. v. 1. t. 8. Gram. Brit. t. 52. Gram.
Aust. v. 2. t. 64. Cat. Syst. Dub. 23.

Though an annual, continues to throw up fresh flowering stalks for a very considerable length of time—flowering and seeding incessantly—differing from all annual grasses—imitates tropical plants—perhaps the only vegetable with us, that does? Foliage tender and very grateful to cattle—the late Mr. Curtis's opinions.

In

* The author of this Sketch is not aware, that the Doctor has published any new edition of his interesting Elementary work.

In laying down a field, it would be well to have a large portion of the seed mixed with other grasses—advantages gained by the practice.

Flowers in the spring, smell like *Reseda odorata*, or *mignonette*—the fragrance continues, even when they are dried—difficult to collect the seeds—causes.—Society for the encouragement of manufactures, &c. London—premiums for the cultivation of this grass.—High Suffolk—whole fields of it, without any other admixture.—Young's Annals, 6th volume—particularly recommended for cows—consequences.

Whether dividing and transplanting, or sowing the seed the best method of cultivation?

Poa aquatica.

Water meadow grass, reed meadow grass, large water poa.

Irish name, CUISE CUILCAMHUIL.

Fl. Lond. v. 2. t. 335. Eng. Bot. v. 19. t. 1315.
Gram. Brit. t. 44. Gram. Aust. v. 2. t. 60.

Tallest of all the species—often five or six feet high—luxuriant late in autumn—perhaps not to be placed among the esteemed grasses? sweet, nutritive, and liked by cattle. Withering—all animals

animals exceedingly fond of it. Lands and situations, in which its growth should be encouraged—richness of the crop at times astonishing—best as hay for packing—a substitute for straw—leaves subject to be diseased—the disease described.

Po'a, or Festu'ca fluviatans,

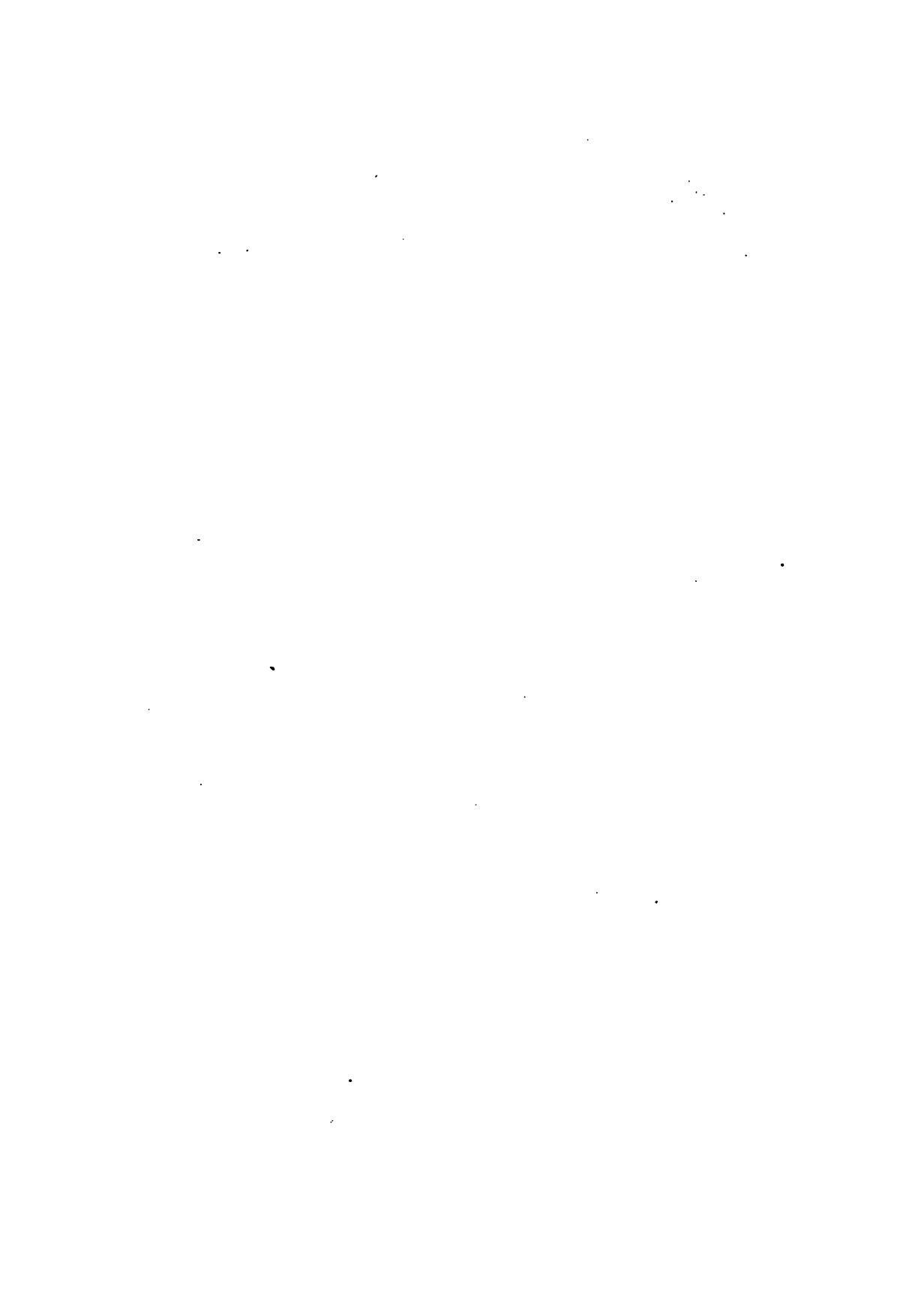
Floating poa, or flote fescue grafs.

Irish name, CUISE SNAMHUIGHILL.

Fl. Lond. v. 1. t. 36. Fl. Rust. 113. Eng. Bot.
v. 22. 1520. Gram. Brit. t. 45. Gram. Aust.
v. 2. t. 77. Cat. Syst. Dub. 27.

Early in the year expands itself over the surface of our ditches and still waters—in certain situations abundant and interesting—interesting to see the poor hungry beast wallowing in search of this sweet and early spring bite—swine are fond of it!—a few hints as to irrigation—the present grafs and some others, as natural exemplifications of the necessity of the practice—practical remarks adduced.

Seeds sweet and nutritious—collected in Poland and Germany—considered as a very agreeable and nutritive addition to their soups and gruels—meal of them little inferior to wheat—bran given
to



to horses, when molested with worms—favourite food of geese—contrary to a generally received opinion, their germinating powers are full as vigorous as those of many other grasses.

Doctor Richardson in a late and short “Essay on the improvement of the great flow bogs of Ireland, particularly the bog of Allen and the Montags in the north”—called drain grass—very common in the bogs—amongst some other particulars, this highly respected, and pains taking enquirer recommends it in its ratio with other grasses for reclaiming wet bogs.

Po'a dis'tans, vel retroflexa,

Retroflexed, or reflexed meadow grass.

Irish name, CUISE SGAOLTEBHLAITHACH.

Fl. Lond. v. 2. t. 361. Eng. Bot. v. 4. t. 986.

Gram. Brit. t. 47. Gram. Aust. v. 2. t. 63.

Pl. Rar. Hib. 8.

Has not been as yet subjected to agricultural tests—would it be valuable on low, moist, maritime situations?—in the neighbourhood of Dublin, with certain advantages, has produced abundant foliage in such situations.

Aira

Aira aquatica,

Water hair grafs.

Irish name, GRUAGFHEUR UISGE.

Fl. Lond. v. 1. t. 60. Eng. Bot. v. 22. t. 1557.

Gram. Brit. t. 29. Gram. Aust. v. 2. t. 41.

Cat. Syst. Dub. 20.

~~Aqua~~ Hippocrates and Theophrastus.

Common on the margins of rich pools and standing waters with *Poa fluitans*—in such situations the only species affording animal food—frequently producing abundant foliage—sweet and juicy—claims further attention.

Aira cespitosa,

Turfy hair grafs.

Irish name, GRUAGFHEUR SGRATHOCHA.

Eng. Bot. v. 21. t. 1453. Gram. Brit. t. 33.

Gram. Aust. v. 2. t. 42. Cat. Syst. Dub. 21.

A tendency to grow in tufts in cavities in moist meadows—leaves roughest and coarsest of all meadow and pasture grasses—not liked by cattle—ought to be got rid of—means.

Milva

Meli'ca cæru'lea,

Purple melic.

Irish, MELOIGFHEUR CORCUIR.

Fl. Lond. v. 1. t. 60 Eng. Bot. v. 22. t. 1557.

Gram. Brit. t. 40. Gram. Aust. v. 2. t. 8.

Cat. Syst. Dub. 20.

Common in deep, spongy boggy situations—grows in other soils—varies accordingly—a very late grass—Ray *gramen serotinum*—substitute for Indian rush—made into twine and much valued by the Continental fishermen—not much affected by water.—Pennant—2d v. Wales—a curious fact of purple melic.

Arun'do phragmi'tes,

Common reed grass.

Irish, CUILE CRUISGIORNADH.

Eng. Bot. t. 401. Gram. Brit. t. 95. Cat.

Syst. Dub. 31.

Arundo, -from *Areo*, because it becomes dry—in Greek, *καλαμος*.—In rivers, ditches, and lakes—in rural economy has its uses—constitutes the crop of the soil in many low lands in

c

England

England—used as thatch—very durable.—Eager attachment, which the bird called the Starling* has to this reed—astonishing—a curious and interesting fact—extraordinary circumstances attending their violent passion for it—bushels of them destroyed by the farmers of the watery districts in one night to save their reed.

Arun'do arena'ria,

Sea-mat weed, sea reed grass, marram, helm.

Irish name, CUILE MUIRIUNATH.

Fl. Ruft. 32. Eng. Bot. v. 8. t. 520. Gram. Brit. t. 99. Cat. Syst. Dub. 31.

Abundant in loose drifting sands in maritime boundaries—opposes and prevents the conflux of drifting dry sands, which threaten inundation—roots woody—collected for fuel—ruinous and melancholy consequences have ensued—the drifting sands meeting with no opposition—nearly a whole parish in Scotland has been destroyed—at Farres in the county of Elgin so great, houses and trees buried from the sight—coast of Norfolk—this mat grass almost alone stays the violence of the German ocean—other instances. Acts passed to prevent its destruction, and to encourage its growth
—27th

* *Sturnus vulgaris.*

—27th of Elizabeth—15th of George II.—
General observations on the subject—may be ma-
nufactured into mats and ropes.

Elymus arena'rius,

Sea mat weed, great lime grass, upright sea lime
grass.

Irish, AOLFHEUR MARA.

Fl. Rust. 31. Eng. Bot. v. 24. t. 1672—Gram.
Brit. t. 108.

Elymus *ελυμος* of Dioscorides, from *ελωω*,
involve. Has it been found in the loose
sands on the sea coasts of Ireland?—From
the great strength of its roots, &c.—a more
effectual resister to drifting sands than the former
—many shores in England examined without find-
ing a single specimen.

Festuca pratensis,

Meadow fescue grass.

Irish, FESCUFHEUR LEANA.

Fl. Lond. v. 2. t. 393. Fl. Rust. t. 84. Eng.
Bot. 23. t. 1592. Gram. Brit. t. 73. Cat.
Syst. Dub. 27.

In moist and low meadows common—carefully to

be distinguished from tall fescue grass,* which under cultivation *seldom* perfects its seed—loliaceous fescue† *never*—both hybrids—meadow fescue the original stock—proofs—produces much good herbage, and placed among the best grasses—may supply any deficiencies in ray grass—hitherto not recommended except by the Farming and Dublin Societies.—Seeds easily gathered, abundant, and grow readily—vegetate almost immediately after they are sown—Young's Annals, 20th vol.—many interesting remarks, Mr. Majendie—"to be classed with the most valuable grasses we possess"—relative value between it and fox tail grass considered.—"County Derry Statistical Report" seldom met with in the county Derry. "Down Report"—very well worth cultivating in moist clays—allude only to *Festuca elatior*—again "Down Report"—*F. pratensis* one of the best for pasture and hay. Doctor Richardson—a fine meadow grass, luxuriant growth, abundant foliage—further remarks by this gentleman.

Festuca

* *Festuca elatior* Fl. Lond. v. 2. t. 392. Eng. Bot. v. 23. t. 1593. Gram. Brit. t. 73. Gram. Auf. v. 2. t. 79? Cat. Syst. Dub. 28.

† *Festuca loliacea*. Fl. Lond. v. 2. t. 394. Gram. Brit. t. 74.



Festuca ovina.

Sheep's fescue grass.

Irish, FESCUFHEUR CAORACH.

Fl. Ruft. t. 102. Eng. Bot. v. 9. t. 585. Gram.

Brit. t. 66. Gram. Aust. v. 2. t. 84. Cat.

Syst. Dub. 25.

Common on very dry pastures, and on sandy hillocks exposed to the sun—leaves resemble bristles growing on very poor soils—is it the favourite food of sheep? doubted by some experienced farmers—is the fineness and superiority of English and Spanish wool attributable to the sheep feeding on it?—some high authorities to support its being the favourite food of sheep—Linnæus the first, who perceived the predilection—Flora Suecica—sheep no relish for such hills and heaths as are without it—Gmelin—Flora Sibirica—Tartars choose such spots as abound with it—they observe that it is highly nutritious, and grateful to their wandering sheep.

The superior fineness of the Spanish wool?—great heat makes wool hairy—cold gives a coarseness—peculiar treatment of the animal—in the heat of summer the sheep feed in the northern provinces of Spain—in winter in the southern provinces—further remarks on this subject.

Late

Late Mr. Curtis no favourable opinion of it—recommends it for forming fine-leaved grass plots—a few more interesting observations by this much to be lamented character.—Common distinctions between *F. ovina*, and *duriuscula*, to which it bears a strong resemblance.

Doctor Richardson's opinions against this grass—not hastily to be acceded to.

Festuca duriuscula,

Hard fescue grass.

Irish, FESCUFHEUR DURUNTA.

Eng. Bot. v. 7. t. 470. Gram. Brit. t. 68. Gram.

Aust. v. 2. t. 83. Cat. Syst. Dub. 26.

Generally found in upland and dry situations, crevices of walls, and fissures of rocks—considered as most excellent in mountainous pasture grounds—less injured by drought than any of the pasture grasses—sheep extremely fond of it—supports them well in rigorous seasons—should not be introduced into low lands and meadows—in arable lands injurious in the highest degree—frequently springs up with the corn—sometimes overpowers it, and occasions the grain to be poor in quality.

Ave'na

Avena elatior,

Tall oat grass.

Irish name, COIRCE AIRDE.

Fl. Lond. v. 1. t. 192. Fl. Rust. t. 7. Eng. Bot.
v. 12. t. 813. *Holcus avenaceus*, Gram. Brit.
t. 39, *Holcus avenaceus*. Gram. Aust. v. 2.
t. 49. Cat. Syst. Dub. 30.

Avena—supposed to be from *aveo* to desire or
covet; cattle being fond of it.

Frequently to be met with—some meadows
abound with it—Doctor Smith's reasons for re-
moving it to the genus *Holcus*—Gmelin first adopt-
ed the change—such high authorities presumptuous
to oppose—perhaps, however, it would be well
to let old established, and commonly received names
remain?—Though a perennial, produces flowering
stalks the first year it is sown—proof by experi-
ment.—Very conspicuous—tallest of the pasture
grasses—seeds to be gathered at the critical time
of their ripening—roots sometimes troublesome in
arable land. Mr. Curtis—in value comes near
to foxtail grass.—Annals of Agriculture, 12th
volume—an excellent and valuable grass, &c.—
Down Reporter—good grass for hay, and amongst
the most productive.

Ave'na

Ave`na flaves`cens,

Yellow oat grafs.

Irish name, COIRCE ORFOLLTACH.

Fl. Lond. v. 1. t. 206. Fl. Ruft. t. 112. Eng.
Bot. v. 14. t. 952. Gram. Brit. t. 89. Gram.
Aust. v. 3. t. 38. Cat. Syst. Dub. 30.

In most parts of the kingdom, forms a principal part of the finest pasturage—one of the least of the oat grafs tribe—meadows, abounding with it, considered valuable—flourishes most on calcareous soils—bids fair to form good sheep pastures.

Doctor Richardson warmly recommends it as an early meadow grafs—further observations, by this gentleman, on yellow oat grafs.

Ave`na pubes`cens,

Pubescent, or rough oat grafs.

Irish name, COIRCE CLUIMHADH.

Eng. Bot. v. 23. t. 1640. Gram. Brit. t. 90.
Gram. Aust. v. 2. t. 50.

Bears some simlarity to the last—foliage bitter—
panicles shining and silvery, tinted with purple—
perhaps

perhaps the bitter principle of its foliage serviceable to cattle?

Dactylis glomerata,

Rough cock's foot grass.

Irish name, CAOLACHOSFHEUR COITCHION.

Fl. Rust. t. 14. Gram. Brit. t. 62. Gram. Aust. v. 2. t. 94. Cat. Syst. Dub. 25.

From *Δακτυλῖς*, digitalis—spikes long and slender, like the finger—English name—inverting the flowering heads—some idea of a cock's foot.

Not the true American orchard grass some years back so valued in England.—Almost all situations produce it—singular attachments—drippings of large trees so injurious to many, grateful to this grass—its value as a meadow and pasture grass fully considered—the late Mr. Curtis's opinion—"Statistical Report of the County of Down"—Mr. Templeton—high and valuable authority—cock's foot grass, worthy of cultivation and liked by horses—Mr. Dubourdieu, the ingenious and learned author of the Report—horses and cows eat it greedily—the principal grass in the famous meadows about Lisburn—further remarks by this gentleman.

“Kilkenny

“Kilkenny Reporter”—a gentleman of very extensive knowledge and erudition—the result of his observations materially different—“good for little, and that cattle will eat round it, and never touch it willingly!”—some reasons offered to reconcile such different observations.

Doctor Richardson—seems inclined to think well of it—grounds of his opinion—merit attention.

Brō'mus mol'lis,

Soft brome grafs, field brome grafs, or soft broom grafs.

Irish name, BRUMFHEUR BOG.

Fl. Ruft. t. 99. Fl. Lond. v. 1. t. 17. Eng. Bot. v. 15. t. 1078. Gram. Brit. t. 77. Gram. Auft. v. 1. t. 19. Cat. Syst. Dub. 28.

From Βρῶμα, esca, food.

Various opinions as to its merits—in many fields at mowing time, it would appear to form almost the whole crop—cause—an early biennial—Mr. Curtis says it is undoubtedly an annual—further remarks on this grafs by Mr. Curtis.

Seeds are like corn—of some species mixed with corn, and made into bread—apt to disagree with the stomach and head.—Can be easily collected in large quantities.

Farmers

Farmers in England do not recommend this grass—cattle not attached to it in a recent, or green state—sown with clover—its merits, or demerits not satisfactorily ascertained—as a spring grass perhaps it might be cultivated with advantage?—“Down Report”—a circumstance as to its value as a hay grass—English Dragoons paid ten shillings a ton more for hay, which appeared to contain most *Bromus mollis*.

In certain parts of Scotland, cultivated as ray grass is with us.

Doctor Richardson's practical observations on this grass—interesting, and should be attended to.

Agrostis vulgaris,

Fine bent grass.

Irish name, TAENFHEUR COITCHION.

Eng. Bot. v. 24. t. 1671. Gram. Brit. 26. Cat. Syst. Dub. 19.

Agrostis, Theophrastus and Dioscorides, from *αγρος*, a field.

Late Mr. Hudson not inaptly placed the trivial or specific name *polymorpha* to some of the common species, considering them as varieties—in an agricultural point of view would be perhaps the best term? Fine bent grass considered by some

as the best of the tribe—abundantly on all dry, heathy, elevated sandy soils—comes in late—perhaps among the best of the tribe for cultivation?—reasons.

Mr. Young—Annals of Agriculture, v. 17. p. 28—his opinion of this grass.

Agrostis alba,

Marsh bent grass.

Irish name, TAENFHEUR BAN.

Eng. Bot. v. 17. t. 1189. Gram. Brit. t. 28. *A mutabilis*.

Agrostis palustris of most agricultural publications.—Mr. Kapp's specific name *mutabilis* justifies Hudson's *polymorpha*—further justification of the terms.—In a botanical point of view—difficult to discriminate the specific differences—the late Mr. Curtis's excellent remarks on this head.

It is rather common in low meadows, the vicinity of rivers, and wet ditches—propagates itself by runners, like strawberries. Some English farmers not partial to it—called *fog* in the west of England.—Some circumstances in its favour.—Bath Papers, v. 9. 132—recommended as a good grass for wet meadows and pastures, where better would not thrive.

Agrostis



Agrostis stolonifera.

Creeping bent grass.

Irish name, TAENPHEUR FORIN.

Fl. Ruft. t. 120. Eng. Bot. v. 22. t. 1532. Gram.
Brit. t. 27. Cat. Syst. Dub. 19.

Engages much attention at the present day—necessary to be pretty full on it.

English farmers, a troublesome couch—black squitch—difficult to separate the roots from clayey arable land—for a long time supposed to be the famous Salisbury Orcheston grass—not so, as proved before.—“County of Down Statistical Report”—the joint grass of the farmers, and in moist situations one of the most valuable—the learned author of the Report considers it as one of the most beautiful, and best.

The “Kilkenny Reporter”—the commonest scutch, or couch they have.

“Derry Report”—hay formed of a full crop of this grass—at Myroe *fiorin* or joint grass—after all cropping, natural *fiorin* spreads a rich mantle of green—its hay preferred to all others.

“County of Tyrone Report”—some circumstances highly worthy of attention—the industrious

trious author recommends hay water, particularly such as abounds with this grass, (which the natives call *foreen*) for increasing the milk in cows—has shot above twenty feet in the season, producing abundance of roots from every joint—in rich bogs, joints farther apart than in barren.

Doctor Richardson, in his late “Essay on the improvements of the great bogs of Ireland,” seems to hope, that by the aid of *Agrostis stolonifera*, which he calls *fiorin* grasses, he may be enabled to convert the boggy and heathy mountains into fattening meadows and pastures.* Some further proofs adduced by the Doctor in favour of *fiorin* grass—corroborate the facts mentioned by Mr. M’Evoy, in his Statistical Report of the County of Tyrone, published in 1802.

Hol’cus

* I ascertained the true *Agrostis stolonifera* for this praiseworthy character in June 1806, by sending him some very perfect recent specimens.

Holcus lanatus,

Meadow soft grafs, fhort awned holcus, white hay-feed grafs.

Irish name, MINFHEUR FADCHALGACH.

Fl. Lond. v. 2. t. 225. Fl. Ruft. t. 118. Eng. Bot. v. 17. t. 1169. Gram. Brit. t. 37. Gram. Auf. v. 1. t. 2. Cat. Syft. Dub. 268.

Holcus of Pliny: from *αλός*, tractus, a furrow, &c.

Common in meadows, pastures, and waste grounds—red panicles appearing, confidered as a proper time for cutting hay—from its hoary appearance, called white hay-feed grafs—thrives best in very light porous foils—turfy ground particularly fited to it. The chaff proportionally exceeds the quantity of feed, from a particular economy, and conformation in the flowers—explained. Mr. Curtis's opinion of this grafs—with fome few exceptions to it, may rank amongst the best.—The great Haller, *optimum pabulum*. Englifh farmers, too foft, and too woolly—however collected as pure grafs—Yorkfhire grafs—confidered by fome as unfit for horfes, being foft and fpongy.

Doctor Richardson confiders himfelf as fingular in reckoning it among the very best graffes—his reafons—fatisfactory and clear.

Convincing

Convincing scientific distinctions to the botanist, between this, and the next, *H. mollis*.

Holcus mollis,

Corn soft grass, creeping soft grass, long awned holcus.

Irish name, MINFHEUR BIRCHALGACH.

Fl. Lond. v. 2. t. 320. Fl. Rust. t. 119. Eng. Bot. v. 17. t. 1170. Gram. Brit. t. 38. Gram. Aust. v. 1. t. 3. Cat. Syst. Dub. 268.

Very similar in some respects to the former—less frequent—grows in a different kind of situation—corn-fields, copses, and hedges—a very creeping root—one very evident mark of distinction—difficult to eradicate—a more slender plant—less downy—flowers larger—colour of the panicle, a dirty white green.—Further distinctions—produces more seed—cause.

Universally considered as a bad grass.—Mr. Curtis—grows well on a sandy soil—bears the drought of summer better than most grasses.

Statistical Reporters, in general, don't seem to know any distinction between the *lanatus* and *mollis*—how necessary is botanical knowledge to the farmer!

“ County

“County of Tyrone Report”—white meadow grasses, being most prevalent, are most sought after.

“County of Derry”—is that generally sown.

“County of Down”—white hay-feed, so much praised in the county of Down, neither good for meadow or pasture, Mr. Templeton—the author of the Report seems to think it peculiarly grateful to cattle.

Holcus odoratus,

Sweet scented Holcus.

Transl. Dub. Soc. p. 222, 1804, with a figure.

De Holco odorato, 4to, cum icon. 1804. Gram.

Aust. v. 3. t. 3, *Holcus repens*.

A most correct and splendid figure of this new grass occurs in Host's Austrian grasses, under the title of *H. repens*, creeping holcus—very distinct from the *H. odoratus* of the same work, v. 1. t. 4. No name more appropriate, being as spreading as the most rank couch we have—as yet not sufficient experience of its value—native of Siberia, Canada, and the North of Europe.—Gmelin Flora Sibirica, p. 100, 101—*Hierocloe*, holy grass—whether does Gmelin mean the *repens* or *odoratus*? both being equally fragrant. Host speaking of the *repens*, “*Tota planta nec vi nec*

D

suavitare

substatie odoris cedit balco odorato."—Walcott and Knaibel, who have so highly distinguished themselves by their Hungarian Flora, tell us, that *H. repens* is to be met with frequently in the cultivated and uncultivated sandy grounds in many parts of Hungary, flowering in April—with us the latter end of March.—A curious fact—has not been known to produce seeds at Glasnevin—further remarks from observations made on it in the Society's Botanical Garden.

Pa'nicum dac'tylon,

Creeping panic grass.

IRISH, PANSIOFHEUR BUNNAIGHEACH.

Fl. Rust. t. 77. Eng. Bot. v. 12. t. 850. Gram.
Brit. t. 13. Gram. Arist. v. 2. t. 18.

Noticed more on account of some curious circumstances mentioned of it, than any agricultural merits, it perhaps possesses?

'The famous *Durva*, of the Hindoos, figured in the 4th vol. of Asiatic Researches, and so celebrated by the late Sir William Jotres for the beauty of its flowers and nutritious quality, as pasture for cattle; nothing more than *Panicum dactylon* of the Cornish shore, *Lambert, Linn. Trans. v. 6.* " Its flowers in their perfect
state

state are among the loveliest objects in the vegetable world, and appear through a lens, like minute rubies and emeralds in constant motion from the least breath of air. It is the sweetest and most nutritious pasture for cattle, and its usefulness added to its beauty induced the Hindus, in their earliest ages, to believe that it was the mansion of a benevolent nymph. "Even the Veda celebrate it—may *Durva*, which rose from the water of life, which has a hundred roots, and a hundred stems, efface a hundred of my sins and prolong my existence on earth for a hundred years." *Jones in Asiatic Researches*, "Botanical Observations on Select Indian Plants." vol. 4, art. 11. *Durva*, p. 248 & 249.

CONCLUSION.

From a *few* experiments and observations on so important a subject—unwise and presumptuous to give any decided opinion as to the respective value of the different grasses, as compared with each other—to justify such a decision, or to ascertain their real merits or demerits—experiments should be numerous, enlarged, and diversified—various soils, various seasons, various situations, influence in a remarkable manner the vegetable world—sometimes change the nature of grasses—mislead as to the taste of animals.

How to manage experiments on the meadow and pasture grasses, and the feeding of cattle.—Shameful and reprehensible, how hay-seeds are at present collected and sold—proofs—measures adopted by the Dublin and Farming Societies to obviate in some degree the present slovenly method of laying down land to grass—have not been attended to by the public as they should.

Whether introducing more than 5 or 6 of the grasses noticed, might not be attended with difficulty, create confusion, and ultimately be of no benefit?

1. Sweet

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1. Sweet scented vernal. 2. Meadow fox-tail.
3. Smooth stalked meadow. 4. Rough stalked
meadow. 5. Meadow fescue. 6. Crested dog's
tail—lands, for which they are best adapted.

Directions for sowing the seeds—proportions
adviseable, and the best means of extending the
cultivation of the valuable meadow and pasture
grasses by the late ever to be revered Mr. Curtis*
—highly interesting, and should be attended to.

Further reflections on the subject, from atten-
tive consideration and observation—from the small
number retained as pasture grasses, to gain the
full value of them, assort them to their particular
situations—high grounds with a thin, stony, gra-
velly soil, or sandy understratum—pasturage
for sheep—on such grounds *Anthoxanthum odo-
ratum*, sweet smelling vernal—*Lolium perenne*,
ray grass—*Cynosurus cristatus*, crested dog's tail
—*Festuca duriuscula*, hard fescue—*Poa annua*,
annual poa—perhaps the best grasses?—propor-
tions—

1 part *Anthoxanthum*—early—ewes require it
to

* An elegant botanical writer of the present day, speaking
of Mr. Curtis, "Let an insignificant mortal breathe one sigh
of gratitude for infinite information to the memory of the
late Mr. Curtis! a King in a realm of botanists! amidst my
various rambles through the regions of the vegetable world,
wherever I have found the traces of his footsteps, so have I
invariably seen them accompanied by judgment, learning, and
accuracy."

to increase their milk—affords tender herbage for the infant lambs, &c.

3 parts Lolium—early and substantial—sheep and lambs flourish on it—good autumn food, &c.

2 parts Cynosurus—why a valuable addition.

2 parts Festuca—endures drought better than other pasture grass—sheep eat it with marked avidity—&c.

2 parts Poa—furnishes excellent food in the autumnal and spring months—&c.

In meadow and low lands, with a deep retentive soil—very different grasses—resort to such lands for our hay and after-grass for the larger cattle—proportions difficult to ascertain from various causes—stated—best grasses for such purposes—Poa pratensis, smooth stalked meadow, Poa trivialis, rough stalked meadow, Alopecurus pratensis, fox-tail, Dactylis glomerata, cock's foot, Phleum pratense, cat's tail, Holcus lanatus, white hay-feed, and Lolium perenne, ray grass. Festuca pratensis, meadow fescue, may perhaps be an useful additamentum?—some objections to it.

In our mountainous moist pastures, Agrostis stolonifera; creeping bent, Agrostis vulgaris, fine bent, Agrostis alba, marsh bent, towards autumn furnish a large proportion of food—further particulars in recommendation of the bent tribe.

In the Philosophical Transactions for 1799, Mr. Tennant a chymist of the first reputation—magnesian

nesian lime-stone—extremely injurious to vegetation—of common occurrence in certain counties in England—means of ascertaining magnesian lime-stone—in England called hot lime-stone.

Mr. Davy that highly celebrated character, professor of chymistry and mineralogy to the Royal Institution, London—differs somewhat in opinion with Mr. Tennant as to the properties of magnesian lime-stone—by a communication made to me in 1806, by my respected friend Mr. Davy, when he visited Ireland—used in Leicestershire, Derbyshire, and the North of England generally—on common lands in much smaller quantities than common lime-stone—rich soils with less caution—peat or turfy soils in any quantity—specimens exhibited—found near Ballyshannon—about Caltra, near Belfast, and in the midland mountains near Donegal.

Distinguished from common lime-stone, by being much slower of solution in nitric acid, and by rendering it milky. DAVY.



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